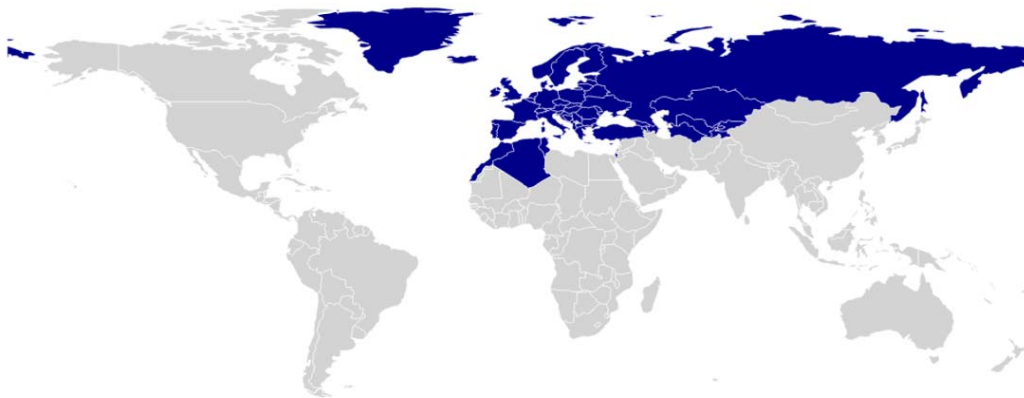**ICAO**

SAFETY

EUROPEAN AVIATION SYSTEMS PLANNING GROUP

EUR 2022 Annual Safety Report

2023 Edition

European and North Atlantic Office

The Annual Safety Report and other EASPG related documentation can be downloaded at:
https://www.icao.int/EURNAT/Pages/EUR-and-NAT-Document.aspx

Introduction

Consistent with the 2023-2025 edition of the *Global Aviation Safety Plan* (GASP, Doc 10004), the European Regional Aviation Safety Plan (EUR RASP) outlines the EUR Region's strategic direction for the management of aviation safety. The EUR RASP 2022-2024 provides a summary of the regional initiatives to address the high-risk categories of occurrences (HRCs) set out in the GASP as well as to support achieving the GASP goals and EUR RASP targets:
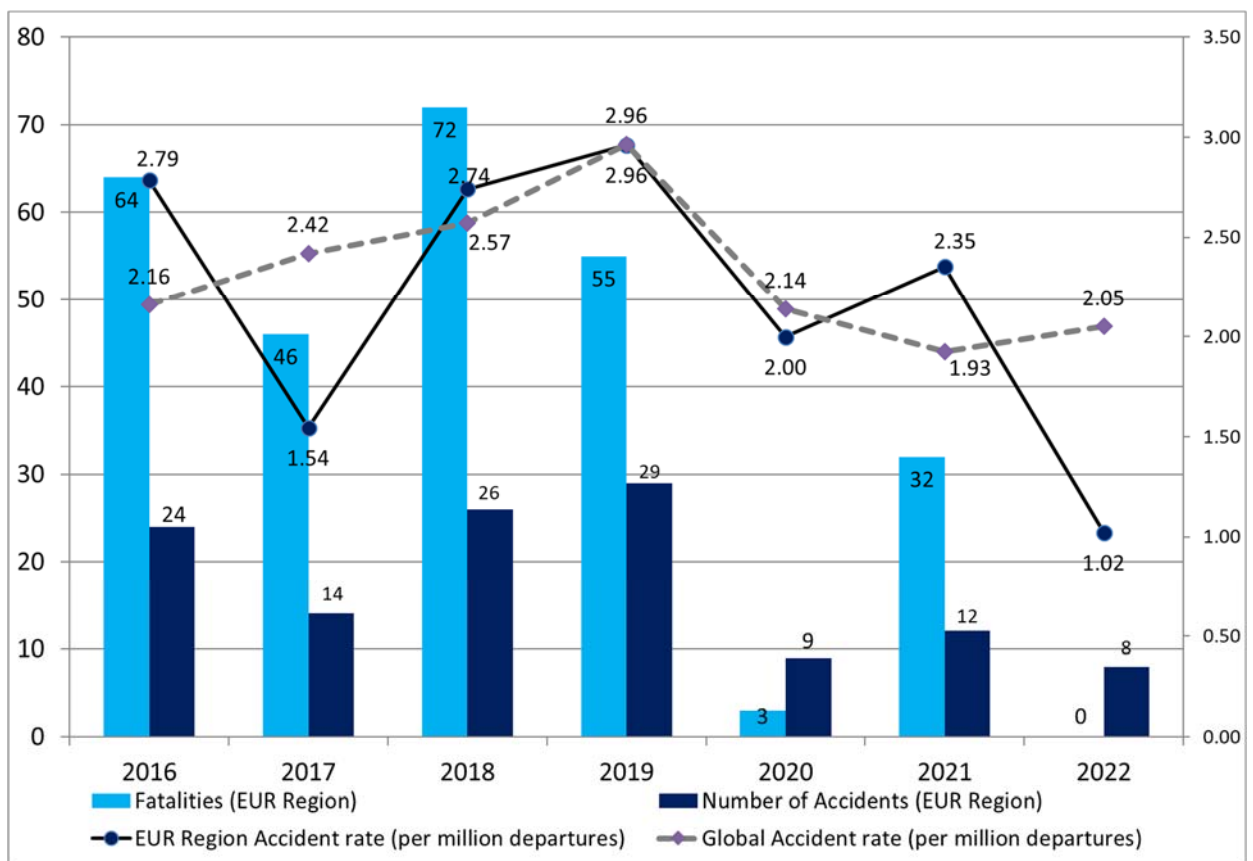
GASP Goals	EUR RASP Targets (2022-2024)
Goal 1: Achieve a continuous reduction of operational safety risks	1.1 – EUR States to maintain a decreasing trend of regional accident rate
Goal 2: Strengthen States' safety oversight capabilities	2.1 – EUR States to improve their score for the effective implementation (EI) of the critical elements (CEs) of the State's safety oversight system (with focus on priority PQs) as follows: 75% by 2024; 85% by 2026 and 95% by 2030
Goal 3: Implement effective State safety programmes (SSPs)	3.1 - By 2023, all EUR States to implement the foundation of an SSP 3.2 - By 2024, all EUR States to publish a National Aviation Safety Plan (NASP) 3.3 All States to work towards an effective SSP as follows: a) by 2025 – Present b) by 2028 - Present and effective
Goal 4: Increase collaboration at the regional level	4.1 - By 2023, EUR States that do not expect to meet GASP Goals 2 and 3, to seek assistance to strengthen their safety oversight capabilities or facilitate SSP implementation 4.3 - By 2025, all States to contribute information on operational safety risks, including SSP safety performance indicators (SPIs), and emerging issues, to their respective regional aviation safety group *(for EUR, EASPG RESG)*
Goal 5: Expand the use of industry programmes and safety information sharing networks by service providers	5.1 - Maintain an increasing trend in EUR industry's contribution in safety information sharing networks, including harmonized SPIs as part of their safety management system (SMS), to EUR States and EUR region to assist in the development of national and regional aviation safety plans
Goal 6: Ensure the appropriate infrastructure is available to support safe operations	6.1 - By 2025, maintain an increasing trend of EUR States with air navigation and aerodrome infrastructure that meets relevant ICAO Standards

This ICAO EUR 2022 Annual Safety Report (EUR 2022 ASR) provides the 2022 values of a series of Safety Performance Indicators (SPI), including number of fatalities, accident rate, effective implementation of safety oversight system and SSP in an attempt to measure the achievement of the EUR Region towards the EUR RASP targets and ultimately towards the GASP goals 1 to 6.

Accident statistics and analysis

The number of accidents involving scheduled commercial operations with aircraft of maximum mass of over 5700 kg and occurring in one of the 55 States in the EUR Region has decreased in 2022 compared to 2021: 8 of such accidents occurred in 2022. None of them was fatal. This resulted in a regional accident rate of 1.02 accidents per million departures, down 57% from the 2021 rate of 2.35 accidents per million departures.

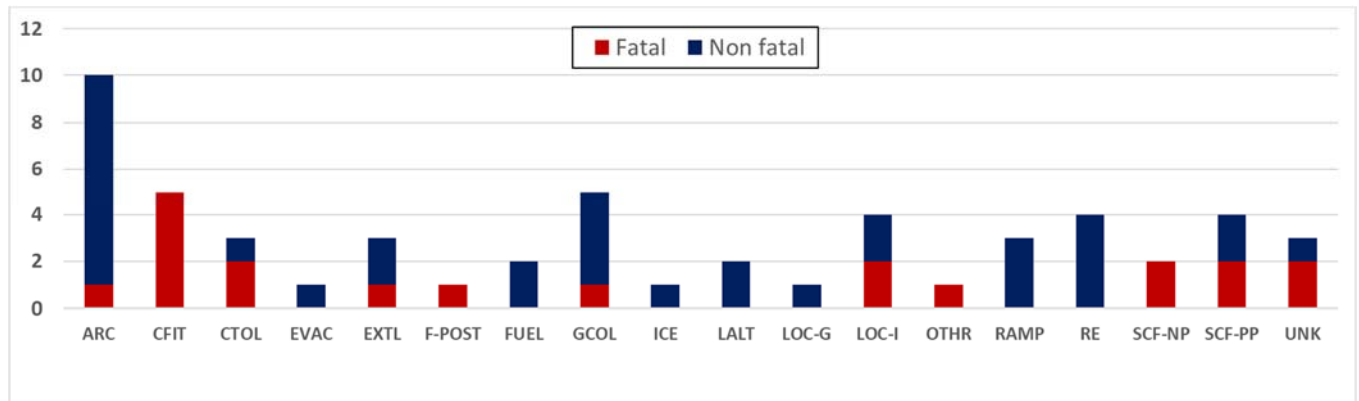| 8 ↘	1.02 ↘	0 ↘	0.00 ↘	0 ↘	0.0 ↘	12% ↘	55 ↗
2022 EUR Number of accidents (a/c ≥ 5700 kg only)	2022 EUR Accident rate per million departures	2022 EUR Number of fatal accidents	2022 EUR Fatal accident rate per million departures	2022 EUR Number of fatalities	2022 EUR Fatality rate per million passengers carried	2022 EUR Accidents related to HRCs	2022 EUR Number of accidents to a/c ≥ 2250 kg
(12 in 2021)	*(2.35 in 2021)*	*(2 in 2021)*	*(0.42 in 2021)*	*(32 in 2021)*	*(0.062 in 2021)*	*(17% in 2021)*	*(41 in 2021)*

The vision of the Global Aviation Safety Plan (GASP) and of the EUR RASP is to achieve and maintain the goal of zero fatalities in commercial operations. Five high-risk categories of occurrence (HRCs) need to be addressed to mitigate the risk of fatalities: controlled flight into terrain (CFIT), loss of control in-flight (LOC-I), runway excursion (RE), runway incursion (RI) and mid-air collision (MAC). For States in the EUR Region, HRCs represent 12% of all accident categories for accidents involving scheduled commercial operations with aircraft of maximum mass of over 5700 kg. This is a decrease to what it was in 2021 (17%).

Annex 13 — Aircraft Accident and Incident Investigation requires that the State of Occurrence forward a notification of an accident to ICAO when the aircraft involved is of maximum mass of over 2 250 kg or is a turbojet-powered aeroplane. In 2022, **55** accidents involving civilian aircraft of maximum mass of over 2 250 kg occurred in the EUR Region, including 20 fatal accidents, causing 51 fatalities. In comparison, in 2021, there were 41 of such accidents, including 10 fatal accidents, causing 69 fatalities.

Date of Occurence	State Of Occurence	Registration	Aircraft Type	Phase Of Flight	Fatalities	Occurrence Category
03-Jan-22	United Kingdom	G-GHSV	BEECHCRAFT SUPER KING AIR	Landing	0	ARC
07-Jan-22	Russian Federation	RA-07295	AS350 Écureuil	En Route	2	SCF-NP
13-Jan-22	Spain	EC-GSK	BELL 412	Maneuvering	0	EXTL
26-Jan-22	France	N38CM	CESSNA 340 A	Landing	0	ICE
27-Jan-22	Greece	2-SLOW	CANADAIR CL-600 CHALLENGER	Landing	0	ARC
31-Jan-22	United Kingdom	N999PX	BOMBARDIER CHALLENGER 300	Landing	0	ARC
11-Feb-22	Russian Federation	RA-33599	ANTONOV AN-2	Climb	2	F-POST
12-Feb-22	Finland	SE-JSS	EUROCOPTER EC145	Landing	0	GCOL
23-Feb-22	Kazakhstan	UP-A0279?	ANTONOV AN-2	Landing	0	UNK
03-Mar-22	Spain	EI-DHH	BOEING 737	Standing	0	RAMP
04-Mar-22	United Kingdom	G-MCGY	SIKORSKY S-92	Landing	1	OTHR
11-Mar-22	Russian Federation	RA-22681	Mil Mi-8	Maneuvering	0	LALT
16-Mar-22	Switzerland	HB-ZTV	AS350 Écureuil	Maneuvering	1	EXTL
29-Mar-22	France	F-GMHJ	EUROCOPTER EC135	Landing	0	ARC
30-Mar-22	Switzerland	D-FLIC	CESSNA 208 CARAVAN	En Route	1	CFIT
02-Apr-22	United Kingdom	G-BJNZ	PIPER PA-23 AZTEC	En Route	0	SCF-PP
22-Apr-22	Ukraine	UR-UZB	ANTONOV AN-26	Take-off	1	CTOL
26-Apr-22	Spain	EI-ENK	BOEING 737	Standing	0	RAMP
30-Apr-22	France	F-GXMP	CESSNA 208 CARAVAN	Approach	0	FUEL
01-May-22	Russian Federation	RA-24212	Mil Mi-8	Landing	1	LOC-I
06-May-22	Italy	YR-BMM	BOEING 737	Landing	0	ARC
21-May-22	France	HB-GAC	BEECHCRAFT 18	Taxi	0	GCOL
09-Jun-22	Italy	I-ELOP	AGUSTA WESTLAND AW109	En Route	7	CFIT
19-Jun-22	United Kingdom	G-AIYR	DE HAVILLAND DH89A	Landing	0	RE
21-Jun-22	Russian Federation	RA-17742	ANTONOV AN-2	En Route	2	CFIT
22-Jun-22	Russian Federation	30001	ANTONOV AN-30	En Route	0	FUEL
25-Jun-22	Switzerland	HB-ZMC	AS350 Écureuil	En Route	0	LALT
29-Jun-22	Russian Federation	RA-25116	Mil Mi-8	En Route	0	SCF-PP
30-Jun-22	Russian Federation	RA-17951	ANTONOV AN-2	Landing	0	ARC
06-Jul-22	France	F-GJRP	AS350 Écureuil	Maneuvering	0	LOC-I
15-Jul-22	Russian Federation	RA-02240	ANTONOV AN-2	Landing	2	CTOL
15-Jul-22	Morocco	SU-KUS	CESSNA 404	Landing	0	ARC
16-Jul-22	Greece	UR-CIC	ANTONOV AN-12B	En Route	8	SCF-PP
19-Jul-22	Greece	SX-HGA	AGUSTA WESTLAND AW109	Taxi	0	LOC-G
20-Jul-22	Hungary	HA-LGA	AIRBUS A321	Standing	0	EVAC
25-Jul-22	Greece	SX-HEJ	BELL 407	Standing	1	GCOL
17-Aug-22	Russian Federation	RA-47848	ANTONOV AN-24	Landing	0	ARC
29-Aug-22	Russian Federation	RA-22833	Mil Mi-8	Landing	4	ARC
03-Sep-22	Poland	SP-HIP	SHORT SC.7 SKYVAN	Approach	2	LOC-I
04-Sep-22	Germany	D-AALU	BOEING 777	Taxi	0	RAMP
04-Sep-22	Latvia	OE-FGR	CESSNA 550 CITATION II	En Route	4	SCF-NP
24-Sep-22	France	EC-NLS	BOEING 737	Landing	0	RE
29-Sep-22	United Kingdom	J2-VBI	BRITTEN NORMAN BN-2 ISLANDER	Landing	0	RE
01-Oct-22	France	F-GZHA	BOEING 737	Landing	0	ARC
05-Oct-22	Greece	SX-EIT	ATR ATR42	Taxi	0	GCOL
19-Oct-22	Spain	EC-MXL	AYRES S2	En Route	1	CFIT
05-Nov-22	Italy	I-PIKI	AGUSTA WESTLAND AW109	En Route	7	UNK
08-Nov-22	Russian Federation	RA-14185	Mil Mi-2	En Route	1	CFIT
15-Nov-22	Russian Federation	RA-25830	Mil Mi-8	Approach	0	LOC-I
20-Nov-22	France	TF-BBM	BOEING 737	Taxi	0	GCOL
23-Nov-22	Italy	I-AMVV	AS350 Écureuil	En Route	0	EXTL
25-Nov-22	France	3A-MVT	AIRBUS HELICOPTERS EC130	En Route	2	UNK
26-Nov-22	United Kingdom	N123CA	DORNIER DO 28A-1	Landing	0	RE
15-Dec-22	Greece	PK-SNF	PILATUS PC-6	Climb	1	SCF-PP
19-Dec-22	Russian Federation	RA-24213	Mil Mi-8	Landing	0	CTOL

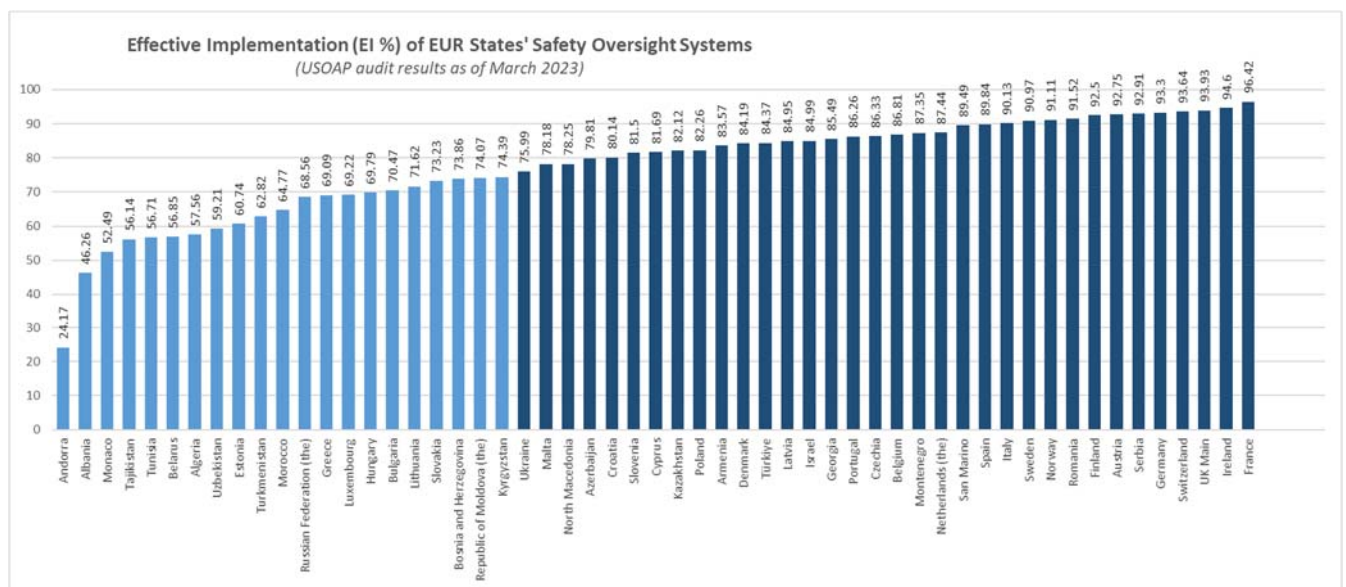The breakdown of the 2022 accidents by Occurrence Categories is on the figure below:

Legend:

Occurrence Category	Occurrence Category Name	Occurrence Category Description
ARC	Abnormal Runway Contact	Any landing or takeoff involving abnormal runway or landing surface contact
CFIT	Controlled Flight Into Or Toward Terrain	In-flight collision or near collision with terrain, water, or obstacle without indication of loss of control.
CTOL	Collision With Obstacle(S) During Takeoff And Landing	Collision with obstacle(s) during takeoff or landing while airborne.
EVAC	Evacuation	Occurrence in which either, (a) a person(s) was/were injured during an evacuation, (b) an unnecessary evacuation was performed, © evacuation equipment failed to perform as required, or (d) the evacuation contributed to the severity of the occurrence.
EXTL	External Load Related Occurrences	Occurrences during or as a result of external load or external cargo operations.
F-POST	Fire/Smoke (Post-Impact)	Fire/Smoke resulting from impact.
FUEL	Fuel Related	One or more powerplants experienced reduced or no power output due to fuel exhaustion, fuel starvation/mismanagement, fuel contamination/wrong fuel, or carburetor and/or induction icing.
GCOL	Ground Collision	Collision while taxiing to or from a runway in use.
GTOW	Glider Towing Related Events	Premature release, inadvertent release or non-release during towing, entangling with towing, cable, loss of control, or impact into towing aircraft/winch.
ICE	Icing	Accumulation of snow, ice, freezing rain, or frost on aircraft surfaces that adversely affects aircraft control or performance.
LALT	Low Altitude Operations	Collision or near collision with obstacles/objects/terrain while intentionally operating near the surface (excludes takeoff or landing phases).
LOC-G	Loss Of Control–Ground	Loss of aircraft control while the aircraft is on the ground.
LOC-I	Loss Of Control–Inflight	Loss of aircraft control while, or deviation from intended flightpath, in flight. Loss of control inflight is an extreme manifestation of a deviation from intended flightpath. The phrase "loss of control" may cover only some of the cases during which an unintended deviation occurred.
OTHR	Other	Any occurrence not covered under another category.
RAMP	Ground Handling	Occurrences during (or as a result of) ground handling operations.
RE	Runway Excursion	A veer off or overrun off the runway surface.
SCF-NP	System/Component Failure Or Malfunction (Non-Powerplant)	Failure or malfunction of an aircraft system or component other than the powerplant.

States' safety oversight capabilities

USOAP CMA results show an average Effective Implementation (EI) score for States in the EUR Region of 77.2%, up from the 2021 value of 76.4%. USOAP CMA results also show that 62% of the States in the EUR Region have already achieved the target of 75% EI by 2024, as outlined in the 2023-2025 edition of the GASP.

77.2% ↗	34 (62%)	20 (36%) ↘	1 (2%)
Average USOAP EI score for EUR States	of EUR States with an EI>75%	of EUR States with an EI>85%	of EUR States with an EI>95%
(76.4% in 2021)	*(Same as in 2021)*	*(22(40%) in 2021)*	*(Same as in 2021)*

Effective Implementation (EI %) of EUR States' Safety Oversight Systems
(USOAP audit results as of March 2023)

The Universal Safety Oversight Audit Programme Continuous Monitoring Approach (USOAP CMA) measures the effective implementation of a State's safety oversight system. In 2022, 10 USOAP-CMA related activities were completed in 8 States of the EUR Region, while two had to be postponed due to security concern and the COVID-19 pandemic.

| State	Type of USOAP Activity	Dates	Status
Albania	Audit	6 to 18 July 2022	Completed
Azerbaijan	ICVM	1 to 8 June 2022	Completed
Italy	SSPIA	15 to 27 June 2022	Completed
	Focused audit	28 June to 5 July 2022	Completed
Luxembourg	Off-site validation	December 2022	Completed
Republic of Moldova	Audit	9 to 21 February 2022	Completed
Russian Federation	Off-site validation	August 2022	Completed
Slovenia	Off-site validation	November 2022	Completed
United Kingdom	SSPIA	16 to 28 November 2022	Completed
	Focused audit	29 November to 6 December 2022	Completed
Belarus	~~Audit~~	--	Postponed
Kyrgyzstan	~~Audit~~	--	Postponed

65%
of priority PQs implemented by EUR States

(Same as in 2021)

The GASP and the EUR RASP call for States to improve their score for the Effective Implementation (EI) of the Critical Elements (CEs) of the State's safety oversight system, with a particular focus on the priority PQs. Priority PQs are defined as a subset of protocol questions (PQ) that, if found not satisfactory, may indicate a lack of capability by a State to identify and/or resolve operational safety and fundamental accident investigation deficiencies effectively. The level of implementation of priority PQs by EUR States is **65%**.

76% ↗
of required corrective action plans (CAPs) submitted by EUR States

(72% in 2021)

When deficiencies in the form of non-satisfactory PQs have been identified a State's safety oversight system, Corrective Action Plans (CAP) should be submitted by States to ICAO, with specific actions and estimated implementation dates to correct the deficiencies identified.

Initial proposed CAPs and subsequent CAP updates should meet the following six criteria:

- **Relevant** — CAPs should address the issues and requirements related to the finding and corresponding PQ and Critical Element (CE).
- **Comprehensive** — CAPs should be complete; including all elements or aspects associated with the finding.
- **Detailed** — CAPs should be laid out in a step-by-step approach, as required, to outline the implementation process.
- **Specific** — CAPs should identify who will do what, when, in coordination with the responsible office or entity.
- **Realistic** — CAPs should be realistic in terms of contents and implementation timelines.
- **Consistent** -- CAPs should be consistent in relation to other CAPs and with the State self-assessment.

24%
of CAPs completed by EUR States

(Same as in 2021)

For the EUR Region, 76 % of required CAPs have been submitted to ICAO and 24% have been reported as completed.

Implementation of State safety programmes

State safety programme (SSP) is an integrated set of regulations and activities aimed at improving safety. Foundation of an SSP" refers to a subset of the Universal Safety Oversight Audit Programme (USOAP) protocol questions (PQs) that have been identified as fundamentals and are considered as prerequisites for sustainable implementation of the full SSP. EUR States have on average implemented 82.64% of these SSP foundational PQs. 44 % of EUR States have implemented at least 90% of the foundation of an SSP, and 2% of EUR States have done so fully.

24 (44%)	82.64%	10 (18%)	30 (55%)
EUR States having implemented at least 90% of the foundation of an SSP	Average SSP foundation implementation of EUR States	EUR States that require all applicable service providers under their authority to implement an SMS (as reported in EFOD for Annex 19 std. 3.3.2.1)	of EUR States have issued a national aviation safety plan
(Same as in 2021)	*(Same as in 2021)*	*(Same as in 2021)*	*(Same as in 2021)*

SSP foundational PQs are grouped into subject areas derived from Annex 19. The level of implementation of these SSP subject areas for States in the EUR is as follows:
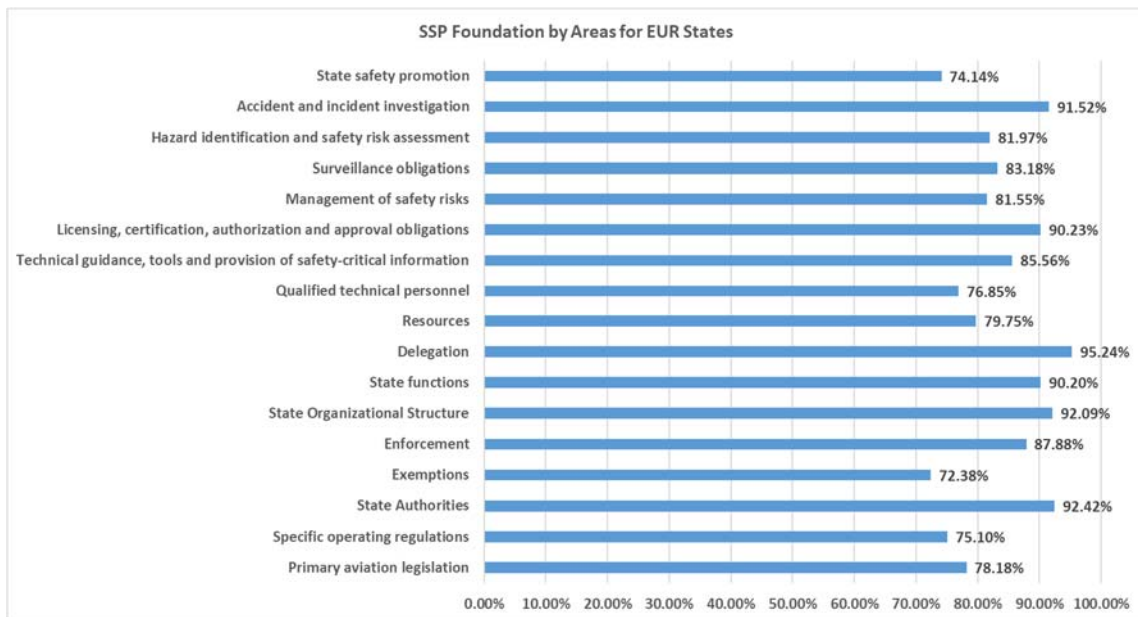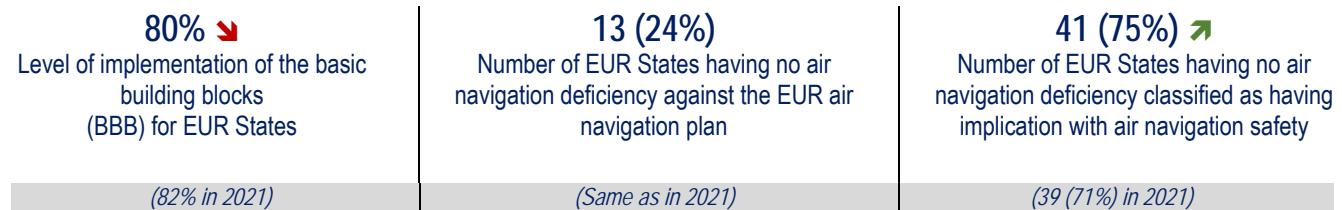

Effective SSPs include the implementation of SMS by service providers within individual States. In the EUR Region, States require service providers implement an SMS, as part as their safety management system obligations defined in Annex 19. However, only 18% of EUR States have reported that they require all applicable service providers under their authority to implement an SMS.

Every State should develop a national aviation safety plan (NASP), in line with the GASP goals, targets and global high-risk categories of occurrences (G-HRCs). The NASP is the means to demonstrate commitment to the implementation of activities for improvement of safety in the State. More than half of the 55 EUR States have issued a National Aviation Safety Plan (NASP), and made it publicly available on the GASP Library at: https://www.icao.int/safety/GASP/Pages/NATIONAL-AVIATION-SAFETY-PLAN-(NASP).aspx.

Air navigation and aerodrome infrastructure

GASP Goal 6 focuses on the need to ensure the appropriate infrastructure is available to support safe operations and the EUR RASP calls for all States to implement the air navigation and airport core infrastructure by 2022. Basic Building Blocks (BBB) is a baseline defined by the basic services agreed by the States under the Convention on International Civil Aviation so that international civil aviation may be developed in a safe and orderly manner. The BBB framework describes the backbone of any robust air navigation system by defining the essential air navigation services to be provided for international civil aviation according to ICAO SARPs and Procedures for Air Navigation Services (PANS).

80% ↘	13 (24%)	41 (75%) ↗
Level of implementation of the basic building blocks (BBB) for EUR States	Number of EUR States having no air navigation deficiency against the EUR air navigation plan	Number of EUR States having no air navigation deficiency classified as having implication with air navigation safety
(82% in 2021)	*(Same as in 2021)*	*(39 (71%) in 2021)*

The level of provision of essential air navigation services (BBBs) and the capability to oversee them, measured by the effective implementation of the USOAP PQs linked to BBB is 80% for EUR States. The relationship between BBB and USOAP PQs is available at https://www4.icao.int/ganpportal/bbbsusoapmapping

Air Navigation Deficiency is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO SARPs, or Procedures for Air Navigation Services (PANS) and which has a negative impact on safety, regularity and/or efficiency of international civil aviation. In the EUR Region, 41 (75%) States have no air navigation deficiency classified as having implication with air navigation safety while 13 (24%) States have no air navigation deficiency against the EUR air navigation plan. As April 2023, one deficiency having a direct impact on safety and requiring immediate corrective actions was identified in the EUR region. An additional 24 deficiencies classified as having top priority requirements necessary for air navigation safety were identified, and 39 with intermediate requirements necessary for air navigation regularity and efficiency.